

## Patent Abstracts of Japan

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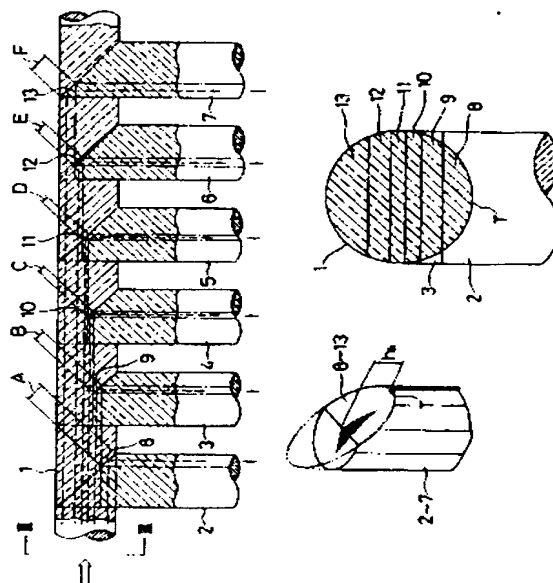
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TITLE : LIGHT SIGNAL BRANCHING DEVICE



**ABSTRACT :** PURPOSE: To improve transmission efficiency by reducing a loss of a light signal in process of transmission, and to simplify constitution by branching the light signal of a main transmission body into light signals, equal in quantity, to respective branch transmission bodies.

CONSTITUTION: Main transmission body 1 has on its circumferential surface six holes at right angles to the axis direction, and respective one-side ends of branch transmission bodies 2~7 made of optical fibers are inserted into respective holes. Transmission bodies 2~7 are equal in diameter to transmission body 1, the entire surfaces of the lead-in parts are made in close contact with internal surfaces of respective holes, and the lead-in parts have contact surfaces at 45° to the axis direction of transmission bodies 2~7 and are cut, by the plane perpendicular to the axis direction of transmission bodies 2~7, a prescribed distance away from contact positions T of transmission bodies 2~7 in contact with the circumferential surface of transmission body 1. The contact surfaces form totally reflective surfaces 8~13 to exclude the optical path in transmission body 1 by the same area each, thereby totally reflecting equal quantities of light signals in the axis direction of transmission bodies 2~7.

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